

Ability of direction of motion of plastic substances in
 O. Kozlovskiy. Doklady Akad. Nauk
 SSSR, 1964, No. 1, p. 150 (in Russian). Analysis
 of the results of experiments on the direction of motion of
 plastic substances in various organs of plants of Solanaceae
 for sugar content in various organs of plants of Solanaceae
 caudexis, as well as tracing of the direction of flow of plastic nutrients
 in grass, showed that the unidirectional flow of plastic nutrients
 is connected with the presence of growing polar organs of
 the plant. Removal of such organs results in a rhythmic
 change of the direction of flow of plastic substances. In
 the other instances the direction of flow of plastic substances
 such rhythmic alteration of direction of flow of plastic substances
 given substance tends to remain higher in the end tissues of a
 section than in the midsection. If leaves of O. is prepared in
 either end of a cutting the cells of that area lose the ability
 to absorb plastic nutrients; cut-off of O. was done by waxing
 G. M. Korolapov

KALARYAN V.

USSR / Plant Physiology. Respiration and Metabolism.

I 1

Abs Jour : Ref Zhur - Biol., No 22, 1958, No 99093

Author : Kazarlyan, V., and Gebriyelyan, G. G.

Inst : Academy of Sciences Armenian SSR

Title : Role of Phellogen in the Translocation of Plastic Substances in Plants.

Orig Pub : Dokl. AN ArmSSR, 24, No 4, 183-188, 1956

Abstract : By means of an especially designed interstitial gas analyzer the authors assayed the composition of the interstitial gases of the peduncles and green stalks of dahlia and the leaf peduncles of hollyhock following their 16 and 24-hour exposure to darkness or to light. The decrease in the content of CO₂ and the increase in that of O₂ at exposure to light attests to the utilization of interstitial CO₂ in the process of the photosynthesis of the chlorophyll-rich phellogen. Experiments with C¹⁴O₂ showed that the principal

Card 1/2

KAZARYAN, V.O.; AVUNDZHYAN, E.S.

Enzymatic activity of leaves of trees of various ages the activity
modification in case of vegetative propagation. Dokl. AN SSSR 108
no.5:958-961 Ja '56. (MIRA 9:10)

1. Botanicheskiy institut Akademii nauk Armyanskoy SSR. Predstavleno
akademikom A.L. Kursanovym.
(Leaves) (Enzymes)

KAZARYAN, V.O.

Aspects of interdependence and antagonism in plant growth and metabolism. Izv. AN Arm. SSR. Biol. i sel'khoz. nauki 10 no. 4:61-74 Ap '57. (MLRA 10:5)

1. Botanicheskiy institut Akademii nauk Armyanskoy SSR.
(Growth (Plants)) (Botany—Physiology)

USSR/Plant Physiology. Photosynthesis

I

Abs Jour : Ref Zhur-Biol., No 13, 1958, 58176

Author : ~~Kaganian V. Q.~~ Gabrielyan G. G., Agababyan V. Sh
Inst : Academy of Sciences, Armenian SSR
Title : On the Connection Between Photosynthesis and
the Energy of Chlorophyll Restoration

Orig Pub : Dokl. AN Arm SSR, 1957, 24, No 5, 225-230

Abstract : The leaves of the red-leaved short-lived perilla taken from vegetating and flowering plants, and from plants which finished blossoming were immersed in water and then placed for a period of 64 hours under continuous illumination in a gasometric chamber containing C^{14} . The radioactivity of chlorophyll (a and b) O_2 in the leaves was determined separately. A direct correlation between the quantity of chlorophyll and the $C^{14}O_2$

Card 1/2

KAZARYAN, V.O.; BALAGMEYAN, N.V.

Vitality of plants obtained from rooted cuttings. Dokl. AN Arm.
SSR 25 no.4:221-225 '57. (MIRA 11:2)

1. Botanicheskiy institut AN ArmSSR. Predstavleno M.A.
Ter-Karapetyanov.

(Plant cuttings) (Clover) (Alfalfa)

KAZARYAN, V. O.

"The principal points of the theory of the increasing con radiation in plant ontogenesis".

report presented at a Joint Session of the Biological Dept. of AN USSR and Biological and Medical Depts. AN Gruzia SSR, Tbilisi, 28 Sept - 30 Oct 1957. Vestnik Akad. Nauk SSSR, 1958, V. 28, No. 1, pp. 121-125. (author Dzidzishvili, N. N.)

KAZARYAN, V.O.; AVUNDZHIAN, E.S.; KARAPETYAN, K.A.

Effect of the rootstock on vital processes in graft leaves.

Dokl. AN Arm. SSR 26 no.2:113-117 '58.

(MIRA 11:5)

1. Botnicheskiy institut Akademii nauk Armyanskoy SSR. Predstavleno
M.A. Ter-Karapetyanom.

(Grafting)

KAZARYAN, V.O.; AVUNDZHYAN, E.S.; KARAPETIAN, K.A.

Nature of the rejuvenating effect of shaping on trees and shrubs.
Dokl. AN Arm. SSR 26 no.3:187-191 '58. (MIRA 12:10)

1. Botanicheskiy institut AN Armyanskoy SSR, Predstavleno N.A.
Tor-Karapetyanom. (Pruning)

KAZARYAN, V.O.; AVUNDZHIAN, E.S.; KARAPETIAN, K.A.

Changes in the composition of free amino acids in the leaves of
Callistemon speciosus in connection with the alternation of
generations. Dokl. AN Arm. SSR 26 no.5:309-313 '58.

(MIRA 11:7)

1. Botanicheskiy institut AN ArmSSR. Predstavleno M.A. Ter-Karapetyan.
nom.

(Callistemon) (Generations, Alternating) (Amino acids)

KAZARYAN, V.O.; AVUNDZHYAN, E.S.

Changes in the amino acid composition of leaves at the beginning of
the generative phase in the development of plants. Dokl. AN Arm. SSR
27 no.2:125-128 '58. (MIRA 11:10)

1. Botanicheskiy institut AN Armyanskoy SSR. Predstavleno G.Kh.
Bunyatnov.
(Amino acid metabolism) (Plants--Metabolism)

KAZARYAN, V.O.

Biological characteristics of the development and senescence
of shrubs and semishrubs. Nauch.trudy Krev.un. 64:25-42 '58.
(MIRA 11:12)

1. Kafedra fiziologii i anatomii rasteniy Yerevanskogo
gosudarstvennogo universiteta.
(Shrubs) (Growth (Plants))

KAZARYAN, Vagan Osipovich; CHUBARYAN, T.G., otv.red.; SHTIBEN, R.A.,
red.izd-vs; AZIZBEKYAN, L.A., tekhn.red.

[Physiological foundations of plant ontogeny] Fiziologicheskie
osnovy ontogeneza rastenii. Brevan, Izd-vo AN Armianskoi SSR,
1959. 425 p. (MIRA 13:4)
(Ontogeny (Botany))

KAZARYAN, V.O.; AVUNDZHYAN, N.S.

Changes in the amino acid composition of leaves of red-leaved perilla showing signs of abnormal vegetative development of the inflorescence. Dokl. AN Arm. SSR 28 no.3:133-137 '59.

(MIRA 12:7)

1. Botanicheskiy institut AN ArmSSR, Predstavleno akademikom AN ArmSSR S. Kh. Bunyatyanom.
(Amino acids) (Leaves) (Perilla)

KAZARYAN, V.O., ABUNDZHYAN, H.S., KARAPETIAN, K.A.

Variation in the bound amino acid content of the different organs of the chrysanthemum at different phases of development. Dokl.AN Arm.SSR 29 no.5:245-250 '59. (MIRA 13:6)

1. Botanicheskiy institut Akademii nauk Armyanskoy SSR. Predstavleno akademikom AN Armyanskoy SSR, G.Kh. Bunyatyanom.

(Amino acids)

KAZARYAN, V.O.; BALAGEZYAN, N.V.

Particulation as the principal cause of senescence and dying away
of perennial grasses with taproot systems. Izv. AN Arm. SSR. Biol.
nauki 13 no.9:16-27 S '60. (MIRA 13:11)

1. Botanicheskiy institut Akademii nauk Armyanskoy SSR.
(GRASSES)
(GROWTH (BOTANY))
(ROOTS (BOTANY))

KAZARYAN, V. A.; ABUNDZHYAN, M.S.; KARAPETIAN, K.A.

Changes in the types of carbohydrates in the different
organs of plants at different stages of development. Dokl.
AN Arm.SSR 30 no.2:125-128 '60. (MIRA 13:6)

1. Botanicheskiy institut Akademii nauk Armyanskoy SSR
Predstavleno akademikom AN Armyanskoy SSR G.Kh.Bunyatyanom.
(Botanical chemistry) (Carbohydrates)

KAZARYAN, V.O.; YESAYAN, G.S.

Effect of pruning the apricot tree on the quantity and quality of
yield. Dokl. AN Arm.SSR 30 no.5:301-307 '60. (MIRA 13:8)

1. Botanicheskiy institut Akademii nauk Armyanskoy SSR. Predstavleno
akad. AN Armyanskoy SSR G.Kh. Bunyatyanom.
(Apricot)

KAZARYAN, V.O.

Effect of temperature on the translocation of assimilates in
plant stems. Dokl. AN ARM SSR 32 no.2:117-122 '61. (MIRA 14:3)

1. Botanicheskiy institut AN Armyanskoy SSR. Predstavleno
akademikom AN Armyanskoy SSR G.Kh. Bunyatyanom.
(Plants, Effect of temperature on) (Plants, Motion of fluids in)

KAZARYAN, V.O.; YESAYAN, G.S.

Effect of pruning on the growth and vital activity of apricot
leaves. Izv. AN Arm. SSR. Biol. nauki 14 no.2:17-26 F '61.
(MIRA 14:3)

1. Botanicheskiy institut AN ArmSSR i Institut plodovodstva i
vinogradarstva ministerstva sel'skogo khozyaystva ArmSSR.
(PRUNING) (ARARAT REGION—APRICOT) (LEAVES)

KAZARYAN, V.O.; BALAGEZYAN, N.V.

Internal factors determining the size of tree and shrub leaves.
Izv. AN Arm.SSR.Biol. nauki 14 no.10:27-36 0'61. (MIRA 16:7)

1. Institut botaniki AN Armyanskoy SSR.
(LEAVES---ANATOMY)

KAZARYAN, V.O.; KARAPETIAN, K.A.

Secretion of amino acids by plant roots. Dokl. AN Arm. SSR 32
no. 3:159-162 '61. (MIRA 14:5)

1. Botanicheskiy institut Akademii nauk Armyanskoy SSR. Predstavleno
akademikom AN Armyanskoy SSR G. Kh. Bunyatyanom.
(Roots (Botany)) (Amino acids)

KAZARYAN, V.O.

Ontogenetic changes in the direction of assimilate translocation
in leafstalks. Dokl. AN Arm. SSR 32 no.5:239-244 '61.

(MIRA 14:9)

1. Botanicheskiy institut AN Armyanskoy SSR. Predstavleno
akademikom AN Armyanskoy SSR.

(Plants, Motion of fluids in)

KAZARYAN, V.O.; KARAPETYAN, K.A.

Changes in the amino acid composition of leaves in proliferous plants. Dokl. AN Arm. SSR 34 no.2:89-92 '62. (MIRA 15:4)

1. Botanicheskiy institut AN Armyanskoy SSR. Predstavleno akademikom AN Armyanskoy SSR G.Kh. Bunyatyanom.
(Proliflication) (Amino acids)

KAZARYAN, V.O.; KHURSHUDYAN, P.A.

Factors determining the direction of growth and the succession of
roots in woody plants. Izv.AN Arm.SSR.Biol.nauki 15 no.9:9-20
S '62. (MIRA 15:11)

1. Botanicheskiy institut AN Armyanskoy SSR.
(ROOTS (BOTANY)) (WOODY PLANTS)

KAZARYAN, V.O.; KARAPETIAN, K.A:

Changes in the amino acid content of almond buds during their hibernation and development. *Biologia plantarum* 4 no.4:269-277 '62.

1. Laboratory of Physiology of the Institute of Botany, Academy of Sciences of the Armenian S.S.R., Erivan, Kanakar, Armenian S.S.R.

KAZARYAN, V.O.

The influence of pruning on the diurnal variation in the concentration of plastic substances in the leaves of *Rhus aromatica* L. *Biologia plantarum* 4 no.4:283-290 '62.

1. Laboratory of Physiology of the Institute of Botany, Academy of Sciences of the Armenian S.S.R., Erivan, Kanaker, Armenian S.S.R.

HAZARYAN, V.O.; KARAPETTYAN, K.A.

Effect of photoperiodism in the change in the amino acid composition of the isolated leaves of perilla. Dokl. AN Arm. SSR 36 no.4:233-236 '63. (MIRA 16:11)

1. Botanicheskiy institut AN Armyanskoy SSR. Predstavleno akademikom AN Armyanskoy SSR G.Kh. Bunyatyanom.

KAZARYAN, V.O.; GABRIYELYAN, G.G.

Identity of amino acid metabolism in bulbaceous plants during the formation of flowers and aerial bulbils. Dokl. AN Arm. SSR 37 no. 1:39-42 '63. (MIRA 16:11)

1. Botanicheskiy institut AN Armyanskoy SSR. Predstavleno akademikom AN Armyanskoy SSR G.Kh.Bunyatyonom.

KAZARYAN, V.O.; DAVTYAN, V.A.

Effect of the processes of generative development on nocturnal
photosynthetic depression in plants. Dokl. AN Arm. SSR 37 no.4:
231-235 '63. (MIRA 17:8)

1. Botanicheskiy institut AN ArmSSR. Predstavleno akademikom
AN ArmSSR G.Kh. Bunyatyanom.

KAZARYAN, V.O.; BALAGEZYAN, N.V.

Diurnal change in the amino acid composition of the leaves of fruit-
ing and barren spurs of the apple tree. Dokl. AN Arm. SSR 36 no.2:
117-121 '64. (MIRA 17:3)

1. Botanicheskiy institut AN Armyanskoy SSR. Predstavleno akademikom
AN Armyanskoy SSR G.Kh.Bunyatyanom.

KAZARYAN, V.O.

Interrelationship between the intensity of photosynthesis and the work of the stomatal apparatus under the conditions of static factors. Dokl. AN Arm. SSR 39 no. 2:117-121 '64.
(MIRA 17:9)

1. Botanicheskiy institut AN ArmSSR. Predstavleno akademikom AN ArmSSR V.O.Gulkanyanom.

KAZARYAN, V.O.; ARUTYUNYAN, L.V.; KARAPETYAN, S.A.

Comparative analysis of the growth and some physiological indices of trees growing in the parks and along the streets of Yerevan. Izv. AN Arm. SSR. Biol. nauki 16 no.3:55-63 Mr '63. (MIRA 17:10)

1. Botanicheskiy institut AN ArmSSR.

KAZARYAN, V.O.; BUNYAN, V.A.

Changes in the intensity of photosynthesis in short-day and long-day plants under similar environmental conditions. Dokl. AN Arm. SSR 39 no.5:313-314 '64. (MIRA 18:2)

1. Botanicheskiy institut AN ArmSSR. Submitted February 19, 1964.

KAZARYAN, V.O.; KARAPETIAN, K.A.

Effect of pruning on the photosynthetic activity of leaves of
fruit trees and ornamental plants. Izv. AN Arm. SSR. Biol. nauki
17 no.10:3-13 0.164. (MIRA 18:8)

1. Botanicheskiy Institut AN ArmSSR.

BARIN, V.O.; BAKHTIAN, N.V.; KARABETIAN, K.A.

Effect of frost on the physiological activity of apple trees
Trav. Bot. Inst. Acad. Sci. USSR 12 no. 2/3 1965 Mr Ap '65.

(MLPA 18-6)

In Botanical Institute AN Armyanskoy SSR, Yerevan.

AZ'RYAN, V.O.

Nature of aging in higher plants. Dokl. AN Arm. SSR 41 no.4:
122-128 '65. (MIRA 18:11)

1. Botanicheskiy institut AN ArmSSR. Submitted February 11, '965.

KAZARYAN, V. S.

How to protect calves from pulmonary diseases.
Yerevan, Aipetrat, 1953. 20 pages; In Armenian.

SO: TABCON Veterinariya; Vol. 31, No. 2, February 1954.

KAZARYAN, Ye.S.

Growing pistachio in Armenia; concerning L.A. Enfiadzhian's article
Izv.AN Arm.SSR.Biol.i sel'khoz.nauki 7 no.8:37-44 Ag '54.

(MLRA 9:8)

1. Arakonservtrest.

(Armenia--Pistachio) (Enfiadzhian, L.A.)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721330009-6"

COUNTRY
CATEGORY

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87063

AUTHOR : Kazaryan, Ye. S.

INST. : Yerevan' Zootechnical-Veterinary Institute

TITLE : Some Wild Vegetable Plants of Armenia.

ORIG. PUB. : Tr. Yerevan'sk. zootekhn.-vet. in-ta, 1957,
No 21, 151-169

ABSTRACT : The flora of Armenia includes about 200
species of plants which are used as food by the inhabitants
and belonging to different families and genera. The edible
wild plants are processed in considerable amounts by the
food industry of the republic. A description is given of
the wild edible plants which are utilized in large amounts
by the inhabitants of Yerevan': *Falcaria vulgaris* Bernh.,
Chaerophyllum caucasicum Fisch., *Portulaca oleoraceae*,
Eremurus spectabilis, *Hippomarathrum microcarpum* M.B.,
Capparis spinosa L., *Rumex patienta*, *R. crispus*, *R. alpinus*,
Chenopodium album L., *Malva* spp., *Fuschkinia scilloides* Ad.
Ferula persica Willd., *Heracleum pastinacaefolium* C. Koch,

CARD: 1/2

KAZARYAN, Ye.S.

Effect of foliary applied boron on yields and fruit formation in
wild clover. Izv. AN Arm. SSR. Biol. nauki 13 no.5:81-85 My '60.
(MIRA 13:9)

1. Kafedra botaniki Yerevanskogo zooveterinarnogo instituta.
(ARMENIA—CLOVER—FERTILIZERS AND MANURES)
(PLANTS, EFFECT OF BORON ON) (SEED PRODUCTION)

KAZARYAN, Yu.A.

Gas burners for drying paint and varnish coatings. Gaz. delo
no.7:37-38 '64. (MIRA 17:8)

1. Akademiya kommunal'nogo khozyaystva RSFSR.

SAYADYAN, A.G.; KOCHARYAN, K.S.; AZIZYAN, A.G.; KAZARYAN, Zh.A.

Preparation of polyvinyl formal ethylal from aqueous dispersion of polyvinyl acetate. Part 2: Effect of the conditions of hydrolysis of aqueous dispersion of polyvinyl acetate on the quality of polyvinyl formal ethylal. Izv. AN Arm. SSR, Khim. nauki 17 no.6:699-702 '64. (MIRA 18:6)

Yerevanskiy politekhnicheskij Institut imeni Karla Marksa, kafedra tekhnologii osnovnogo organicheskogo sinteza.

L 44148-66 EST(1) Gw	
ACC NR: AT6018241	SOURCE CODE: UR/3021/64/000/259/0092/0101
AUTHOR: <u>Kazaryants, E. S.</u>	
ORG: none	18 B+1
TITLE: Objective method for forecasting of southwest cyclones in Central Asia	
SOURCE: Tashkent. Universitet. Nauchnyye trudy, no. 259. Fizicheskiye nauki, no. 23, 1964. Fizika atmosfery i aviatsionnaya meteorologiya (Physics of the atmosphere and aviation meteorology), 92-101	
TOPIC TAGS: cyclone, weather forecasting, weather map	
<p>ABSTRACT: The possibility was studied for establishing numerical criteria in terms of which the appearance, rate of progress, and nature of the South Caspian and Murgabskiy cyclones may be forecast. The study is based on the meteorological data of the Tashkent Weather Bureau for the period 1958--1962. The criteria selected were: 1) the position of cold centers on $OT_{\frac{500}{1000}}$; 2) intensity of the cold center; 3) temperature gradient of the average temperature on $OT_{\frac{500}{1000}}$; 4) difference of the temperature Laplacian from the geopotential on AT_{500}; 5) wind velocity on AT_{500} in the same region as in 4 above (see Figs. 1 and 2). It is concluded that in terms of these criteria, collected in the initial stages of cyclone formation, it is possible to predict the</p>	
Card 1/3	

L 44148-66

ACC NR: AT6018241

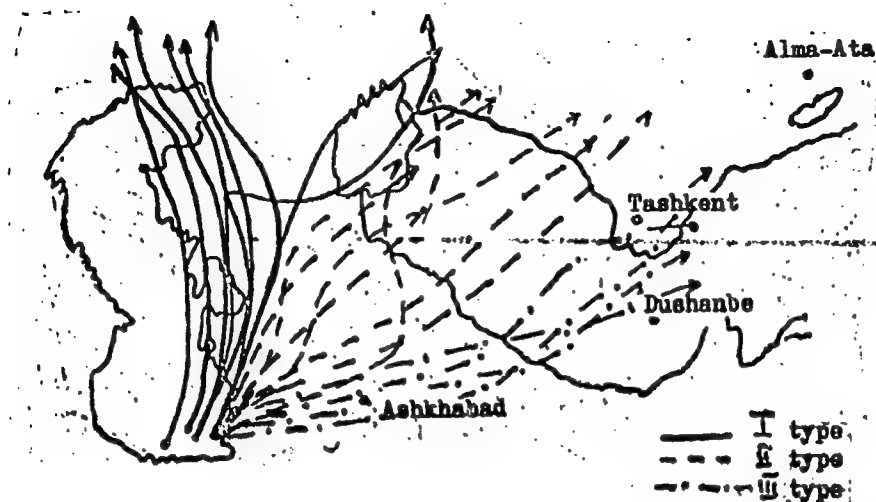


Fig. 1. Trajectories of a number of South Caspian-cyclones, 1958-1962.

Card 2/3

L 44148-66

ACC NR: AT6018241

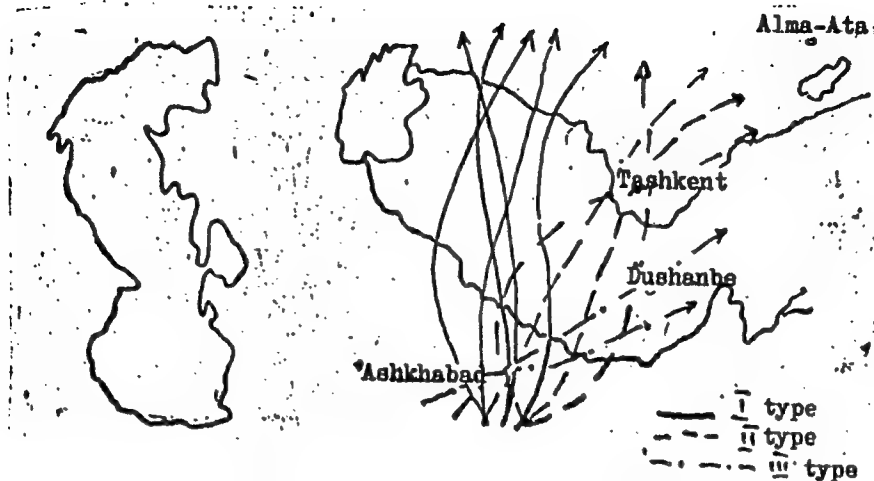


Fig. 2. Trajectories of Murgabskiy cyclones, 1958--1962.

appearance, rate of progress, and nature of the cyclone. It was found that the South-Caspian cyclones follow a different path from the Murgabskiy cyclones. Orig. art. has: 11 graphs.

Cord 3/3 hs SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 006

KAZAS, I.A.

The Phylloxera problem. Zashch. rast. ot vred i bol. 8 no.7:20-22
Jl '63. (MIRA 16:9)

1. Vsesoyuznaya protivofil'oksernaya stantsiya, Odessa.

KAZAS, M.V.

Drying of peltries and fur cutouts by means of infrared rays.
Kozh. chuv. prom. 6 no.6:11.12 Je '64. (MIRA 17:9)

017-775 78
KISEL'NIKOV, V.N.; KAZAS, T.S.

Thermochemistry of substitution in an aromatic ring. Part 1:
Heat effect on resorcin sulfonation. Zhur.ob.khim. 27 no.10:2877-2884
O '57. (MIRA 11:4)

L.Ivanovskiy khimiko-tekhnologicheskii institut.
(Resorcinol) (Sulfonation)

KAZAS, V.

Technological parameters for the mechanization of sheep pelt
dressing. Kozh.-obuv.prom. 6 no.11:35 N '64.

(MIRA 18:4)

KAZAS, V.I.

Use of the continuous action photoelectric device for studying
the microstructure of clouds from an airplane. Izv. AN SSSR
Ser. geofiz. no.5:805-809 My '63. (MIRA 16:6)

(Meteorological instruments)

KAZAS, V.I.; KONYSHEV, Yu.V.; LAKTIONOV, A.G.

A continuous aircraft device for measuring the size and concentration of large droplets in clouds. Izv. AN SSSR. Fiz. atm. i okeana 1 no.11:1212-1215 N '65.

(MIRA 18:12)

1. Institut prikladnoy geofiziki AN SSSR, Moskva. Submitted April 28, 1965.

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 91-92

Card 2/3

I 4110-46

ACCESSION NR: AP5019066

ENCLOSURE: 01

Fig. 1.

1- central cylindrical part of the casing; 2- intake tube

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L 8983-66 INT(1)/FCC

GW

ACC NR: AP5028361

UR/0362/65/001/011/1212/1215

33

AUTHOR: Kazas, V. I.; Kon'shev, Yu. V.; Laktionov, A. G.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Continuous airborne instrument for measuring the size and concentration of large drops in clouds

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 11, 1965, 1212-1215

TOPIC TAGS: weather forecasting, meteorologic instrument, atmospheric precipitation

ABSTRACT: It is known that the most important mechanism leading to the growth of cloud drops to the size of rain drops is gravitational coagulation which leads to a rapid growth of the drops if their initial diameter is greater than 50 microns. The presence in the clouds of drops larger than 50 microns also determines the possibility of the development of precipitation. The article presents details of an aircraft-mounted instrument which permits reliable data on the drops in the size range of 30 to 150 microns in diameter. A diagrammatic sketch of the instrument is shown (See Fig. 1)

Card 1/3

UDC: 551.508.7

L 8983-66
ACC NR. AP5028361

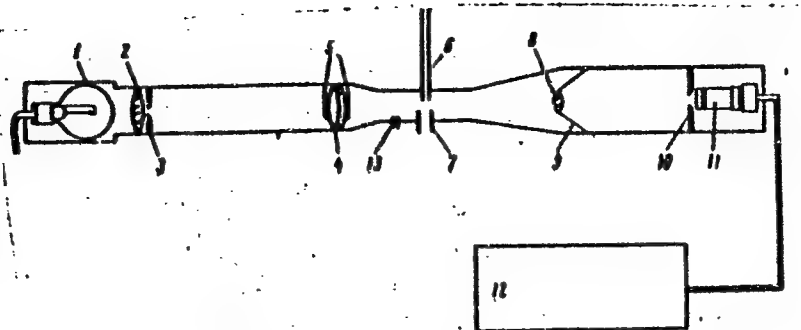


Fig. 1 Scheme of instrument.

The basic elements of the instrument are a sensing device located on the outside of the aircraft and an electronic recording system inside the cabin. Tests of the operation of the instrument were made on board an aircraft in October, 1963. Based on data taken at the time, the article gives curves for the distribution of the integral concentrations of the drops as a function of the drop diameter. Orig. art. has: 4 formulas and 4 figures.

Card 2/3

Card 3/3

FRENKEL', Ye.B.; SHAKHET, G.P.; KAZAS, V.M.; KHMEL'NITSKAYA, Ye.G.;
BRUSSER, V.M.; KAS'YANOVA, R.V.

New method of moistening fur skins and outs in furrier work.
Kosh.-obuv.prom. 5 no.1:28-31 Ja '63. (MIRA 16:2)
(Fur—Dressing and dyeing)

ZARIDZE, G.M.; KAZASHVILI, T.G.

A variety of pegmatite veins in the Northern Caucasus. Izv.vys.
ucheb.zav.; geol.i razv. 2 no.8:65-70 Ag '59. (MIRA 13:4)

1. Gruzinskiy politekhnicheskiy institut.
(Caucasus, Northern--Pegmatites)

KAZASKI, KH.

"Stimulative Experiments with Winter Wheat." p.265 (IZVESTIYA, Vol 2, 1951,
Sofiya.)

SO: Monthly List of Russian Accessions, East European / Vol. 3, No. 3, Library of Congress, March 1951, Unc

KALASHI, KH.

"Production of healthy potato seeds by planting potatoes twice." p 15, (XOCHIMATI, NO
ZEMELIE, Vol 6, #1, 2, Jan/Feb 1951, Bulgaria)

East European Vol 2 #8
SO: Monthly List of ~~Russian~~ Accessions, Library of Congress, August 1953, Unc

MELNISHKI, Liuben; BOROV, Ivar; KAZASOV, Dimo; Protogerova, I.,
[translator]; KRAPACHEV, K., red. izd-va; ZEMALOV, Yu.,
red.; IVANOV, I., tekhn. red.

[Bulgaria; a guidebook] Bolgariia; putevoditel'. Sofia,
Meditsina i fizkul'tura, 1963. 327 p. (MIRA 16:12)
(Bulgaria--Guidebooks)

KAZATINOV, YU. M., SOKOLOV, S. N., SILIN, I. N., AMAGLOBELI, N. S.,

"Determination of the Coupling Constant of Pion-Nucleon Interaction by
Differential Cross Section for Elastic (NP)- Scattering at 90, 380 - 500, 630 Mev"

paper presented at the Intl Conference on High Energy Physics, Rochester, N. Y.
and/or Berkly California, 25 Aug - 16 Sep 1960.

KAZATKIN, M.R., gvardii mayor meditsinskoy slushby

Surgical treatment of the varicose enlargement of the veins of the
spermatic cord. Voen.-med. zhur. no.9:87 S '51. (MLRA 9:9)
(SPERMATIC CORD--BLOOD SUPPLY)

GLOZMAN, O.S.; KAZATKINA, A.P.

Blood replacement. Trudy Inst.kraev.pat. AN Kazakh,SSR 2:7-31 '54
(BLOOD--TRANSFUSION) (MIRA 10:1)

KUZNETSOVA, N. N.

FAZLISSELA, H. A. - "Changes in the coagulability of the blood in typhus and typhoid". Kiev, 1955. Kiev Order of Labor Red Banner Medical Inst imeni Academician A. A. Bogomolets. (Dissertation for the Degree of Candidate of Medical Science.)

So: Enizhnaya Letopis', No. 43, 22 October 1955. Moscow

KAZATSKAYA, G.G.

~~Changes in the blood coagulability in typhus and typhoid fever.~~
Vrach. delo no.1:87 Ja '57 (MLRA 10:4)

1. Kafedra infektsionnykh bolezney Kiyevskogo meditsinskogo instituta.
(BLOOD--COAGULATION) (TYPHUS) (TYPHOID FEVER)

Казатская Г. Г.

KAZATSKAYA, G.G., kandidat meditsinskikh nauk

Changes in the potassium and calcium content of the blood in
patients with bacillary dysentery. Vrach.delo no.9:963-965 S '57.
(MLRA 10:9)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya.Padalka)
Kiyevskogo meditsinskogo instituta
(DYSENTERY) (CALCIUM IN THE BODY)
(POTASSIUM IN THE BODY)

POSTOVIT, V.A.; KAZATSKAYA, G.G.

Clinical aspects and diagnosis of paratyphoid C. Vrach.delo no.10:
1093 O '59. (MIRA 13:2)

1. Kafedra infektsionnykh bolezney (zaveduyushchiy - prof. B.Ya.
Padalka) Kiyevskogo meditsinskogo instituta.
(PARATYPHOID FEVER)

PADALKA, B.Ya., prof.; KAZATSKAYA, G.G.

Appendicitis as a mask for typhoid fever and dysentery. Vrach.
delo no.4:106-109 Ap '61. (MIRA 14:6)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya.Padalka)
Kiyevskogo meditsinskogo instituta.
(APPENDICITIS) (TYPHOID FEVER) (DYSENTERY)

KACATSEAYA, N.P.

Practical work in the principles of stockbreeding for ninth
grade students. Politekh.obuch. no.8:38-40 Ag '57. (MLRA 10:9)

1. Proletarskaya srednyaya shkola No.1 Rostovskoy oblasti.
(Stock and stockbreeding--Study and teaching)

MARCHENKO, N.A., kand. tekhn. nauk; RAYNER, Z.S., inzh.; KAZATSKAYA,
Ye.N., inzh.; ZHUKOVA, V.I., red.; FOMICHEV, A.G., red. izd-
va; BOL'SHAKOV, V.A., tekhn. red.

[Applying copper coatings from an ammonia electrolyte] Nanesenie mednogo pokrytiia iz ammiachnogo elektrolita. Leningrad, 1961. 21 p. (Leningradskii dor. nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Zashchitnye pokrytiia, no.13) (MIRA 15:10)

(Copper plating)

KAZATSKER, A. A., Cand Tech Sci -- (diss) "Automatization of
hydrometric ^{operations} ~~work~~ on ~~the~~ irrigation systems by ^{the use of devices} ~~using~~ ~~appara-~~
~~tuses~~ with semiconductors." Mos, 1957. 11 pp (Min of Agri-
culture USSR, All-Union Academy of Agricultural Sciences in
Hydraulic
Lenin, All-Union Sci Res Inst of ~~Hydraulic~~ Engineering and
Melioration), 100 copies (KL, 2-58, 113)

KAZATSKER, A.A.

SUBJECT: USSR/Irrigation

99-3-3/7

AUTHOR: Kazatsker, A.A. Engineer.

TITLE: Automation of Hydrometric Tasks at Irrigation Systems by the Application of Instruments Equipped with Semiconductors.
(Avtomatizatsiya gidrometricheskikh rabot na oresitel'nykh sistemakh s ispol'zovaniyem apparaty na poluprovodnikakh)

PERIODICAL: Gidrotekhnik i Melioratsia, 1957, Issue No 3, Pages 22-27, (USSR)

ABSTRACT: The delivery and the distribution of water constitutes the main task of an irrigation system. Operative efficiency can be increased by the use electric telemeters. However, the telemeters used by industry can not be utilized by irrigation projects, due to existing conditions, such as long distances between central control points and points to be served, lack of electric power, etc. Tests conducted by the author have disclosed the necessity of taking 6 exact measurements during each 24 hours. Telemeters for irrigation systems ought to be reliable and uncomplicated, not requiring difficult adjustments and having few moving parts.

Card 1/2

TITLE: Automation of Hydrometric Tasks at Irrigation Systems by the Application of Instruments Equipped with Semiconductors.
(Avtomatizatsiya gidrometricheskikh rabot na oresitel'nykh sistemakh s ispol'zovaniyem apparaty na poluprovodnikakh)

Instruments equipped with semiconductors fill these requirements, and in addition, offer the advantage of long service. As a result of research work carried out by the Federal Institute for Hydretechnics and Melioration, a frequency-type telemeter operating on semiconductor triodes in connection with an RC generator was constructed. The basic deviation of this telemeter, disregarding the outside factors, is $\pm 1\%$. Such a telemeter can be installed in irrigation systems without necessitating considerable re-equipment of hydrotechnical installations. The semiconductor triode units will supply the dispatcher's office with up-to-date and reliable data and reduce the number of operating personnel. The article contains 8 figures.

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

SOV/99-59-4-5/10

AUTHOR: Anisimov, V.A., Candidate of Technical Sciences, and
Kazatsker, A.A., Engineer

TITLE: On the Problem of Supplying Electric Power for the
Automation of Melioration Systems (K voprosu ener-
geticheskogo obespecheniya avtomatizatsii melio-
rativnykh sistem)

PERIODICAL: Gidrotekhnika i melioratsiya, 1959, pp 32-36 (USSR)

ABSTRACT: The authors analyze the possibility of rendering
Soviet irrigation systems fully automatic and re-
ject it as being too expensive. For example, the
project concerning full automation of the Nizhne-
Donskoy magistral'nyy kanal (Lower Don Main Canal)
calls for construction of a special 6-kv line along
with several step-down transformer stations. This
alone brings about a 50% rise in the costs of con-
struction of the automation equipment. Therefore,
the idea of controlling the irrigation systems

Card 1/3

SOV/99-59-4-5/10

On the Problem of Supplying Electric Power for the
Automation of Melioration Systems

mechanically and telemechanically seems more economical since a water gate needs only a maximum of 0.76 kw/hr per irrigation season, i.e., the power to open and close the water gate 200 times. The most appropriate source of power would be in this case an alkali cadmium-nickel storage battery of the 10 NEN-100-type which is 884 x 173 x 388 mm. Its volume amounts to 100 ampere-hrs having a total reserve of electric power of 1.25 kw/hr. One such battery costs only 1,440 rubles according to the 1955 price index. The costs for installing such a battery into a water lock will not exceed 3-4,000 rubles as compared with 30-35,000 rubles to be spent on electric equipment of a single water lock of the Lower Don Main Canal project, not to speak of the additional personnel for maintenance and repair. An-

Card 2/3

SOV/99-59-4-5/10

On the Problem of Supplying Electric Power for the
Automation of Melioration Systems

other example for an estimate of low-cost tele-
mechanic control is the Kul'-Arykskaya irrigation
system (irrigation area - 22,000 hectares) which
would require only 80-100 storage batteries of
the 10 MKN-100-type.

ASSOCIATIONS: VASKHNIL, (Anisimov), VNIIIM (Kozatsker)

Card 3/3

KAZATSKER, A.A.

207/4677

Polysulfonamides, primary, 1, 3, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 84

PURPOSE: This collection of articles is intended for specialists working in the field of endometrial disorders.

CONTENTS: The articles discuss basic transistor parameters, methods of selecting components, and some problems in the use of transistor circuit elements. Two of the articles describe the use of semiconductor diodes for frequency selective amplification. In particular, they are mentioned. The authors recognize 11 of the 26 articles.

NAME OF COMPANY

[illegible]

WILLIAMS: Library of Congress

S/194/61/000/007/029/079
D201/D305

AUTHOR: Kazatsker, A.A.

TITLE: Transistorized telemetering equipment for irrigation systems

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 55-56, abstract 7 V408 (V sb. Poluprovodnik. pribory i ikh primeneniye, no. 5, M., Sov. radio, 1960, 264-271)

TEXT: A description is given of the telemetering apparatus TA (TA) for automatic level measurement in hydraulic engineering installations of irrigation systems and for transmitting indications to the control room. The TA equipment consists of a transmitter and receiver coupled by a communication line. The equipment is based on a transistorized frequency type telemetering system, in which the changes in the measured parameter are converted into the changes of frequency of alternating current transmitted by the communication

Card 1/2

Transistorized telemetering...

S/194/61/000/007/029/079
D201/D305

line. A calibrated receiver shows the frequency changes. The uses of the above system makes it possible to have one line only for simultaneous transmission of several indications. The TA has a "zero" level control for the whole of the telemetering channel. This permits taking into account all errors arising in the channel owing to the instability of individual elements. The description is given of basic circuits and of the mechanical construction together with the results of experiments with the described TA. [Abstracter's note: Complete translation]

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Card 2/2

KAZATSKIY, Sh., predsedatel'.

The main thing in socialist competition. Sov.profsoiuzy 1 no.4:37-40
D '53. (MLBA 6:12)

1. Komitet professional'nogo soyusa Odesskogo zavoda Radial'no-sverlil'-
nykh stankov.
(Socialist competition) (Machinery industry)

KAZATSKIY, V.E.

4495

Rezervy Privodyatsya V Deystviye. (Odes. Zauod Radial'no -Sverlil'nykh Stankov. M.)
Profizdat, 1954. 80 s. s ill. 20 sm. 10.000 Ekz. 1r. 20 K. -(55-419) F 621.952.002: 658.5

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

30851. KAZAVCHINSKIY, Ya. Z.

K raschetu ezhektora. Nauch. trudy (Odes. in-t inzhenerov mor. flota),
vyp. 8, 1949, s. 22-37.

KAZAYCHINSKIY, YA. Z.

USSR .

A method of determining the constants for the virial form of the equation of state for a real gas. Ya. Z. Kazaychinskiy. Doklady Akad. Nauk S.S.S.R. 95, 1005-8 (1974).
By use of the thermodynamic data from earlier work (S. Young, Proc. Phys. Soc. (London) 13, 602 (1893); Michels, et al., C.A. 31, 8363*) on the thermodynamic surface of a real gas, equations are developed for the calcn. of the const. of the virial equation. The values of the const. are given for N, C₂H₆, CO₂, C₃H₈, CH₄, NH₃, and H₂O. J. R. L.

BD
MGT

Name: KAZAVCHINSKIY, Yakov Zakharovich

Dissertation: Study of Thermal Properties and the
Method of forming the equation for
the state of Real Gases

Degree: Doc Tech Sci

Affiliation: Odessa Inst of Engineers of the
Naval Fleet

Defense Date, Place: 30 Dec 55, Council of Moscow Order of
Lenin Power Engineering Inst imeni
Molotov

Certification Date: 13 Oct 56

Source: RMVO 6/57

27

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721330009-6"

AID P - 1333

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 15/19

Authors : Kazavchinskiy, Ya. Z., Kand. of Tech. Sci. and
Martynovskiy, V. S., Doc. of Tech. Sci.

Title : Zhukovskiy, V. S., Engineering Thermodynamics. (Review)

Periodical : Teploenergetika, 2, 57-59, F 1955

Abstract : The textbook on engineering thermodynamics of
Zhukovskiy, V. S., 3 rd. ed., revised, published by
Gostekhizdat in 1952, is reviewed.

Institution : None

Submitted : No date

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721330009-6

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721330009-6"

KAZAVCHINSKIY, Ya.; KATKHE, O.

Calculation of the saturated vapor elasticity curve. Khokhlov, A. I. (MIRA 8:10)
32 no.2:53-58 Apr-June 1955.
(Vapor pressure)

KAZAVCHINSKIY, Ya. Z.

Category: USSR / Physical Chemistry
Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical analysis. Phase transitions.

B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29864.

Author : Kazavchinskiy Ya. Z., Katkhe O. I.

Inst : not given

Title : Calculation of Calorific Values of Real Gases According to p,v,T Data by the Method of Graphic Differentiation.

Orig Pub: Teploenergetika, 1956,³No 7, 23-26

Abstract: The proposed procedure of graphic differentiation of data has been evolved as a result of development of the previously published method of formulation of the equation of state of a real gas (RZhKhim, 1955, 18283). This procedure of graphic differentiation can be utilized over the entire region of temperature and density variation, including those regions which are not encompassed by the equation of state, and also the regions for which the previously described method is not suitable (Doming W.E., Shupe L. E., Phys. Rev., 1931, 37, 638; 38, 2245; 1932, 40, 848).

Card : 1/1

-8-

Please Invt. Naval Fleet Engineers

КАЗАВЕРЖЕ, В. П.

Category : USSR/Atomic and Molecular Physics - Gases

P-7

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6375

Author : Kazavchinskii, Ye. Z.

Title : The Configuration of the Thermodynamic Surface and a Rational Equation of State for a Real Gas,

Orig Pub : Nauch. tr. Odessk. in-t inzh. mor. flota, 1956, vyp. 12, 28-37

Abstract : Consideration of the isochore sections of the thermodynamic surface for real gases leads to the conclusion that these configurations are close to linear and that if the equivalent temperature $\tau > 3$ they become linear. For a more convenient description of a real thermodynamic surface, it is proposed that the surface be considered as two surfaces: a linear one, the limiting-critical one, and its supplement, the " Δ -surface." The equation for the "limiting-critical" surface is given in the form $\frac{PV}{RT_k} = K\pi\varphi = a_1(\tau - 1) +$

$$+ \left[1 + \frac{a_1}{\varphi^2} + \frac{a_2}{\varphi^2} + \frac{a_4}{\varphi^4} + \frac{a_6}{\varphi^6} + \frac{a_8}{\varphi^8} \right], \quad (1)$$

Cerd : 1/3

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6375

and that for the " Δ -surface"

$$\Delta = P[\psi(\tau) - \psi(1)] \quad (2)$$

where P , V , R , and T_k have the usual significance, π , φ , and τ are the equivalent pressure, volume and temperature respectively, while a_1 , a_2 , a_4 , a_6 and a_8 are functions of the equivalent volume

$$\varphi = 1/\varphi + b_2/\varphi^2 + b_4/\varphi^4 + b_6/\varphi^6 + b_8/\varphi^8,$$

and ψ is a function of τ only. The complete equation of state for real gas is of the following form.

$$\frac{PV}{RT_k} = \left(1 + \frac{b_0}{\varphi} + \frac{5/8}{\varphi^2} \frac{b_0^2}{\varphi^2} \right) (\tau - 1) +$$

$$+ \left(1 + \frac{a_1}{\varphi} + \frac{a_2}{\varphi^2} + \frac{a_4}{\varphi^4} + \frac{a_6}{\varphi^6} + \frac{a_8}{\varphi^8} \right) + C \left(\frac{1}{\tau} - 1 \right) \quad (3)$$

Cerd : 2/3

AUTHOR: Kazavchinskiy, Ya.Z., Dr.Tech.Sci.
and Kalkhe, O.I., Engineer.

TITLE: The equation of state for steam (Uravneniye sostoyaniya dlya vodyanogo para.)

PERIODICAL: Teploenergetika, 1958, Vol 5 No.7., pp. 26-30 (USSR)

ABSTRACT: In a previous article in Teploenergetika No.7., 1958, the formulation of the equation of state for steam was based on reference thermal data obtained by graphical-analytical consideration of experimental data. The equation of state is given in dimensionless co-ordinates. It is then converted into a form convenient for the calculation of thermal and calorific values, and consists of four functions, each of which depends on only one variable. These are termed the elementary functions of the equation of state; three depend only on the density, and one only on the temperature. Three are found as series of powers, by a procedure which is not quite the same as previously. The methods of obtaining the elementary functions are explained. The final equation of state is derived and is subjected to detailed checking, the results of which are given. Calculated and reference values of the dimensionless complex pv/RT_k are given in Table.1; differences up to 0.3% are found in some cases. Table.2. gives a comparison of calculated and skeleton table data of this dimensionless complex in the sub-critical region; agreement is good.

Card 1/2

The equation of state for steam.

SOV/96-58-7-7/22

A similar comparison for enthalpy is given in Table.4., and the differences are acceptable. Specific heats at constant pressure are compared in Table.5: the values differ from those of other authors by not more than 2% over most of the range, but the difference is 6 - 12% near the saturation curves at sub-critical pressures and near the maxima at super-critical pressures. It is remarked that experimental determinations are, of course, particularly difficult in these regions. There are 5 tables and 12 literature references (7 Soviet, 4 English and 1 German)

ASSOCIATION: Odesskiy Institut Inzhenerov Morskogo Flota (Odessa Institute of Marine Engineers)

1. Steam - Mathematical analysis
2. Equations of state - Applications
3. Steam - Specific heat

Card 2/2

AUTHOR: Kazavchinskiy, Ya.Z., Dr.Tech.Sci. SOV/96-58-7-11/22

TITLE: The determination of elementary functions of the equation of state of a real gas from experimental thermal data. (Opredeleniye elementarnykh funktsiy uravneniya sostoyaniya real'nogo gaza po opytным termicheskim dannym.)

PERIODICAL: Teploenergetika, 1958. Vol. 5, No.7, pp. 44-48 (USSR)

ABSTRACT: Although the equation of state of a real gas cannot be derived by the classical methods of thermodynamics, they can be used to indicate the structure of the equation. If the temperature and specific volume are taken as independent variables, then all the magnitudes that are functions of the state of the body can be uniquely determined in terms of these independent variables, including in particular the difference between the specific heat at constant volume of the real gas and a perfect gas. Using this principle and well-known thermodynamic relationships, an integral equation is derived for the pressure. It is shown that one term in this equation is small, particularly at higher temperatures; a second term is called the linear term and the third the non-linear term. In this equation the non-linear term is of very simple mathematical structure and can, therefore, be expressed simply. If the temperature and pressure are chosen as the independent variables, an integral equation of similar structure is arrived at; but the non-linear term is far from small in comparison with the linear

Card 1/3

The determination of elementary functions of the equation of state SOV/96-58-7-11/2
of a real gas from experimental thermal data.

and is a very complex function. Therefore, the work is based on the use only of temperature and volume as independent variables. The equation derived is then reduced to dimensionless form by introducing the ratios of the temperature to the critical temperature and of the critical volume to the volume. It is shown that the formula can be further simplified when these ratios lie between certain values. The object of the present article is to show how to sub-divide the non-linear part of the dimensionless equation using experimental data for only moderate temperatures. For this purpose the structure of the non-linear part of the equation is studied. A careful analysis is made of the surface of state of a real gas with particular reference to isochoral sections. The p - v - T data are plotted in dimensionless form on isochores and isotherms. Available experimental data for steam were used to construct the isotherms and isochores given in Figs. 1. and 2. respectively; the shapes of the curves are discussed. A further function is then derived that depends only on the non-linear part of the equation of state, and may be used to analyse the structure of that equation. Isotherms of this function are given in Fig.3. It is then shown that the formulation of the equation of state for a real gas, from experimental data for p - v - T , consists in finding three or four functions that depend on the

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The determination of elementary functions of the equation of state of a real gas from experimental thermal data. SOV/96-58-7-11/22

density and one elementary function depending on temperature. The determination of the elementary functions of the equation of state of a real gas is then considered. Taking first a simple case, it is shown that the formulation of the equation consists in finding the temperature function of the non-linear part. The procedure for doing this is explained; use is made of the construction shown in Fig.4. The procedure for deriving the necessary functions from different isotherms is explained. A worked example is given of a formulation for ethane on the basis of published experimental data. The equation satisfied the experimental data over their entire range with divergencies of less than 0.1%, except in a few points where it is somewhat greater. Investigations made with steam showed that calorific values calculated from the equation that was drawn up by the method proposed are in good agreement with experiment. There are 4 figures and 2 literature references (English).

ASSOCIATION: Odesskiy Institut Inzhenerov Morskogo Flota (Odessa Institute of Marine Engineers)

1. Gases - Properties
2. Equations of state - Applications
3. Mathematics - Applications

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KAZAVCHINSKIY, Ya.Z.; KESSEL'MAN, P.M.

Basic data on the specific volume of water and water vapor.
Inzh.-fiz. zhur. no.7:3-7 J1 '59. (MIRA 12:10)

1. Institut inzhenerov morskogo flota, g. Gdessa.
(Water) (Water vapor)

5 (3,4)

AUTHORS: Kazavchinskiy, Ya. Z., Zagoruchenko, V. A. SOV/153-2-2-6/31

TITLE: Equation of State and the Thermodynamic Properties of Ethane
(Uravneniye sostoyaniya i termodinamicheskiye svoystva etana)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya
tekhnologiya, 1959, Vol 2, Nr 2, pp 180 - 182 (USSR)

ABSTRACT: The equation suggested here was derived according to the latest
experimental investigations (Ref 1-6). Expressed in dimension-
less coordinates, it appears as follows: $\sigma = \alpha_0 + \alpha_1 \cdot \tau + \beta \cdot \tau$
(1), with σ - the dimensionless complex (being $\frac{pv}{RT_k}$, α_0 and β
being elementary functions of the equation, dependent on the re-
duced density $\omega = \frac{v_k}{v}$; τ - the temperature function dependent
on the reduced temperature $\tau = \frac{T}{T_k}$). Without dwelling on the
method of deriving the elementary functions of equation (1),
the authors only point out that the best way was found for do-
ing justice to the experimental data, namely by representing
 α_0 , α_1 and β as polynomials which contain the first, the second

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Equation of State and the Thermodynamic Properties of SOV/153-2-2-6/31
Ethane

and the fourth of the next even numbered exponents of the mentioned density. At the same time it was found that the temperature functions for ethane can be represented with sufficient accuracy in a very simple expression: $\gamma = \frac{1}{\tau^3}$. The suggested

equation can be applied for all practically necessary temperatures in the given sphere of density $\omega = 0 - 1.6$. A comparison could prove that the thermal values computed on the basis of the equation, are in exact accordance with the experimental data (Refs 1,2). As it was shown in investigations (Ref 4), the equation computed according to methods here described, is of great use, not only for the computation of the thermal values, but also for the computation of the caloric values in a wide range of parameter variations. For ethane enthalpy and entropy S were computed for several temperatures and densities, and were compared to the statements of reference 1. This comparison showed that the caloric values easily found by means of the state equation, correspond to the values of reference 1 (achieved through a more troublesome graphic method). Another equation frequently used in other countries (Ref 8), does not guarantee the neces-

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Equation of State and the Thermodynamic Properties of SOV/153-2-2-6/31
Ethane

sary accuracy of the computation of the thermal values. Therefore the tables of thermodynamic properties of ethane computed by means of that equation, are not reliable and their application may lead to wrong results. There are 8 references, 3 of which are Soviet.

ASSOCIATION: Odesskiy institut inzhenerov morskogo flota; Kafedra termodinamiki i obshchey teplotekhniki (Odessa Institute for Naval Engineers; Chair for Thermodynamics and General Heat Technology)

SUBMITTED: January 31, 1958

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SOV/76-33-3-24/41

5(4)

AUTHORS:

Kazavchinskiy, Ya. Z., Zagoruchenko, V. A.

TITLE:

The Equation of State and Thermodynamic Properties of Propylene (Uravneniye sostoyaniya i termodinamicheskiye svoystva propilena)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp 662 - 664 (USSR)

ABSTRACT:

The equation of state of propylene was set up in dimensionless coordinates by methods already described (Ref 1): $\sigma = \alpha_0 + \alpha_1 \tau + \beta \psi$ (1), where σ = dimensionless complex value $= pv/RT_k$, $\alpha_0, \alpha_1, \beta$ = elementary functions of the equation dependent on density $\omega = v_k/v$, ψ = elementary function dependent on temperature $\tau = T/T_k$. On the basis of experimental data on p, v, and T published in the papers (Refs 2-5) it was possible to establish the equation for the temperature function ψ of propylene. According to the equation of the isothermal lines the authors found the expressions

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The Equation of State and Thermodynamic Properties
of Propylene

SOV/76-33-3-24/41

for the elementary function of equation (1) by the above-mentioned methods (Ref 1). It was therefore possible to determine very accurately the thermal properties of propylene by extrapolation within the range of high and low temperatures. The equation of state completely corresponds to the critical point and the curve of saturation. It was shown by a comparison between the thermal values on the curve of saturation according to data from Ref 4 and values computed according to the present equation of state (Table) that within the range of a change in density $\omega = 0 - 2.5$ the maximum error is 1%, while it is 4% in the case of $\omega = 2.6$. Consequently, the equation may be employed for setting up tables of the thermodynamic properties of propylene; in addition, it is the first equation of state that holds for the liquid as well as for the gas phase. There are 1 table and 6 references, 1 of which is Soviet.

ASSOCIATION:

Odesskiy institut inzhenerov morskogo flota (Odessa Institute of Marine Engineers)

SUBMITTED:
Card 2/2

August 11, 1957

5(4) SOV/76-33-5-6/33
 AUTHORS: Kazavchinskiy, Ya. Z., Tsosman, G. I. (Odessa)
 TITLE: The Equation of State of Freon-41 (Methylfluoride) (Uravneniye sostoyaniya freona-41 (metilftorida))
 PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 5, pp 992 - 996 (USSR)
 ABSTRACT: In a previous paper (Ref 2) $\sigma = \alpha_0 + \alpha_1 \tau + \beta \psi$ was derived for the equation of state of a real gas and the methods of analytical determination of the coefficients $\alpha_0, \alpha_1, \beta$, and the graphic-analytical determination of the function ψ was given. This paper uses the experimental data for p, v, and T obtained by Michels (Ref 3). The equations for three isothermal lines are formulated: the critical isothermal line 44.6°C (in dimensionless coordinates $\tau = 1$), 100°C ($\tau = 1.174351$), and 150°C ($\tau = 1.331707$). The equation of the isothermal lines runs as follows: $\sigma = \tau + B\omega + C\omega^2 + D\omega^4 + E\omega^6$. The values for B, C, D, and E are shown in table 1. The graphic-analytical determination of the temperature function ψ showed that it can be represented with sufficient accuracy by

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$\psi = \frac{1}{\tau^5}$. On account of these equations of isothermal